



KENTUCKY CAPSULES

SUBJECTS: Social Studies, Science and Language Arts

GRADES: 4-5

KERA GOALS: Meets KERA goals 1, 2, 3, 4, 5, and 6

ACADEMIC EXPECTATIONS: Make sense of a variety of materials they read; make sense of various messages to which they listen; organize information and use of classification rules and systems; speak using appropriate forms for different audiences and purposes; identify, analyze, and use patterns; observe, analyze, and interpret human behaviors, social groupings, and institutions; understand, analyze, and interpret historical events; show their abilities to become self-sufficient individuals; show their abilities to become responsible members of a family, work group, or community; use critical thinking skills to solve a variety of problems in real-life situations; organize information to develop or change their understanding of a concept; use a decision-making process to make informed decisions; connect knowledge and experiences from different subject areas; use what they already know to acquire new knowledge, skills, or interpret experience; and expand their understanding of existing knowledge.

DURATION: One class period of 35-45 minutes

GROUP SIZE: One or two classes of 8 to 60 students

SETTING: Indoors

KEY VOCABULARY: Time line, past, chronological order, and capsule word list

ANTICIPATORY SET: Today we are going to look at several “capsules” of time. Every generation has unusual events that make their time period original. In each of our “capsules” there are special happenings from a particular era.

OBJECTIVES: The students will be able to: 1) identify a time period by using key words; 2) arrange time periods from oldest to youngest; 3) think logically and express thoughts orally.

MATERIALS:

- ◆ One bag of large lima or great northern beans
- ◆ a fine tip felt pen
- ◆ clear nail polish
- ◆ eight or more empty film canisters
- ◆ time period signs
- ◆ time period description cards.

BACKGROUND: Kentucky’s history is diverse and begins even before human presence in the south central area of the state. Many of the interesting and unusual historical events of Kentucky and Mammoth Cave are not found in traditional text books. We have chosen eight of the more interesting topics dealing with Kentucky and Mammoth Cave history for you and your students to investigate. (See time period description cards.)

PROCEDURE:

1. The teacher places the students into eight groups of two or three students (to have the students work in smaller groups the teacher may wish to make duplicates of several capsules). The teacher then reads the eight time period signs before placing them on the blackboard. The signs should **not** be read or placed in chronological order.
2. Each group is given a capsule (film canister). They are told that their capsule matches one time period. All the words are different clues representing only one time period. They are not to try to match a bean per time period! Each time period has 6 “bean clues” to help reveal the conclusion. The students can open their capsules and look at their words.
3. While the students are looking at their words the teacher can wander around the room to answer questions or help with unfamiliar words.
4. When the groups seem to know their matches, the teacher can ask for a group to volunteer to go first. The students read the words from their capsule. The teacher writes these words on the black board. Then the group announces which sign they think the words match. (If using more than one of each capsule to have smaller groups, the teacher can ask if any other group has the

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same words and asks if they agree with the first group.) The teacher asks the group why and if anyone else agrees or disagrees. This will lead to discussions as each group announces their findings.

5. Once all of the capsules have been matched to the signs, the teacher lets the students know the signs need to be in chronological order. We start with the oldest event at the left end of the blackboard and works toward the youngest event to the far right. The teacher asks, "Who thinks they have an idea of what happened first?"

6. As each sign is selected to be put in order, the teacher gives the group with the matching time capsule the matching time period description card to read. The teacher encourages the students to look for words that were read from the capsules that might help them choose the next sign.

7. After the signs are placed in order, the teacher asks the students, "What if we made a time capsule for today? What words could we include and what would our sign say?" After listing ideas on the board the teacher can collect the students' materials.

CONCLUSION: Different times throughout our history can be captured in a few words to represent major events. These events help to make each time period unique.

EVALUATION: The teacher is able to evaluate the students as they work with their time capsules as well as through their class discussion.

EXTENSIONS:

1. This could lead to a writing activity, where the students have discovered a container and in it they found ... from ...time period. The students fill in the blanks and provide a description of an era.

2. The students could create a time capsule that would represent the special things that have happened during their school year. These capsules can be saved to be opened by next year's class.

3. The students could visit a museum, such as the Kentucky Museum in Bowling Green, the American Cave and Karst Museum in Horse Cave, or the South Central Cultural Center (formerly Museum of the Barrens) in Glasgow to see how museums are time capsules capturing special times and ways of life.

TIME PERIOD DESCRIPTION CARDS

THE CAVE BEGINS TO FORM

According to geologists, millions of years ago Kentucky was covered by a shallow, warm **sea**. Deposits from this **sea** created layers of **limestone** that would later “house” the world’s longest cave. Over time the **sea** moved to the south as glaciers from the north began to melt. The melting glaciers created a **river** that carried a large amount of sand and sediment. After a great deal of time passed, the sediments from this river formed layers of **sandstone** on top of the **limestone**. Later cracks and **sinkholes** formed allowing water containing **carbonic acid** to make its way to the **limestone**, creating Mammoth Cave.

PREHISTORIC PEOPLE IN THE CAVE AREA

The first people to enter Mammoth Cave made their way through dark passages with **cane reed** torches. They wore only a breach cloth and **slippers** as they traveled through the cave. These people used **mussel shells** to scrape **minerals** from the cave walls. **Gourds**, used as utensils, have also been found in the cave. Much of our information is known from the discovery of **mummies** of these ancient people.

WESTWARD EXPANSION INTO KENTUCKY

The Appalachian Mountains blocked the way of westward expansion until **early settlers** discovered an opening through the mountain chain. Later this opening was named the **Cumberland Gap**. In **1792** when Kentucky became a state, it was considered to be the **wild west**. These early pioneers lived in **log cabins** and were called **longhunters** because they traveled long distances and were gone for long periods of time.

THE WAR OF 1812 HITS HOME

In 1812 the United States fought a war **against England**. The powerful English Navy blockaded our sea ports and our country could no longer import **gun powder**. At that time early pioneers knew **cave dirt** contained **saltpetre**, the main ingredient needed to make **gun powder**. Many **slaves** worked in Mammoth Cave processing the dirt. Pumps and **hollow logs** (used as pipes) took the liquid mixture from the cave for final processing.

TIME PERIOD DESCRIPTION CARDS

JESSE JAMES STRIKES AGAIN

In **1880**, **Judge** Roundtree and his daughter were visiting Mammoth Cave. That evening the **judge**, his daughter, and other visitors boarded a **stagecoach** for **Cave City**. On their way through a wooded area their **stagecoach** was stopped by a band of men carrying **guns**. They demanded everyone's money and other valuables. The **judge** was forced to give up his **pocketwatch**. The engraved watch was found a few months later on the slain body of the notorious outlaw, Jesse James.

DR. CROGHAN – EXPLORES OTHER POSSIBILITIES

Dr. John Croghan of Louisville, Kentucky was one of the early private owners of Mammoth Cave. In the mid-1830's **tuberculosis** (an ailment affecting your lungs) was a fatal disease. One part of Dr. Croghan's plan was to try an **experiment** in the cave to **cure** this illness. He actually built an underground hospital for 15 patients. The second part of his plan was to build a **hotel** in the cave, continue cave **tours**, and make Mammoth Cave a more famous **tourist attraction**.

MAMMOTH CAVE – A NEW NATIONAL PARK

After many years of private ownership Mammoth Cave became a National Park in **1941**. **Visitors** from all over the world come to see this special place. **Rangers** work very hard to protect the **wildlife, vegetation** and unique **landforms** found in Mammoth Cave National Park. National parks are believed to contain our nation's greatest treasures.

KENTUCKY CAVE WARS

The 1920's were a time of great **competition** in the Mammoth Cave area. **False advertising** and **trickery** was common on the route to Mammoth Cave to entice people to visit other caves. **Private owners** posted **road signs** or stationed people along the roads to Mammoth Cave. The most famous cave explorer of the time was **Floyd Collins** who lost his life in Sand Cave. Floyd was searching for the first cave entrance on the road from Cave City.

CREATING THE CAPSULES

1. With a fine felt tip or permanent marker, print the time period words on large lima or Great Northern beans, one clue per bean.
2. After the marker has dried, paint over the words with clear nail polish.
3. After the nail polish has dried fill each film canister with a time period's beans.

TIME PERIODS WORD LISTS

1. The Cave Begins to Form

Sea
Sandstone
Limestone
Sinkholes
River
Carbonic Acid

2. Prehistoric People in the Cave Area

Cane Reed
Minerals
Slippers
Gourds
Mussel Shells
Mummies

3. Westward Expansion Into Kentucky

Early Settlers
Wild West
Cumberland Gap
1792
Log Cabins
Longhunters

4. The War of 1812 Hits Home

Against England
Slaves
Gunpowder
Saltpetre
Cave Dirt
Hollow Logs

5. Dr. Croghan Explores Other Possibilities

Tuberculosis
Experiment
Hotel
Tours
Tourist Attraction
Cure

6. Jesse James Strikes Again

1880
Cave City
Judge
Guns
Stagecoach
Pocketwatch

7. Kentucky Cave Wars

Competition
False Advertising
Private Owners
Trickery
Road Signs
Floyd Collins

8. Mammoth Cave – A New National Park

1941
Wildlife
Visitors
Vegetation
Rangers
Landforms

The Cave Begins to Form

**Prehistoric
People in the
Cave Area**

Westward Expansion into Kentucky

The War of 1812 Hits Home

Dr. Crooghan

Explores

Other

Possibilities

Jesse James Strikes Again

Kentucky

Cave Wars

Mammmoth

Cave —

A New

National Park